0280

#2

OIPE

RAW SEQUENCE LISTING   DATE: 12/14/2001
PATENT APPLICATION: US/10/006,191   TIME: 10:30:19

Input Set : A:\RTS-0274 Sequence Listing.txt
Output Set: N:\CRF3\12142001\I006191.raw

ENTERED

```
        6 <110> APPLICANT: William Gaarde
        7         Andrew T. Watt
        9 <120> TITLE OF INVENTION: ANTISENSE MODULATION OF CONNECTIVE TISSUE GROWTH FACTOR
EXPRESSION
       11 <130> FILE REFERENCE: RTS-0274
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/006,191
C--> 13 <141> CURRENT FILING DATE: 2001-12-10
       13 <160> NUMBER OF SEQ ID NOS: 153
       16 <210> SEQ ID NO: 1
       17 <211> LENGTH: 20
       18 <212> TYPE: DNA
       19 <213> ORGANISM: Artificial Sequence
       21 <220> FEATURE:
       23 <223> OTHER INFORMATION: Antisense Oligonucleotide
       25 <400> SEQUENCE: 1
       26 tccgtcatcg ctcctcaggg                                     20
       29 <210> SEQ ID NO: 2
       30 <211> LENGTH: 20
       31 <212> TYPE: DNA
       32 <213> ORGANISM: Artificial Sequence
       34 <220> FEATURE:
       36 <223> OTHER INFORMATION: Antisense Oligonucleotide
       38 <400> SEQUENCE: 2
       39 atgcattctg cccccaagga                                     20
       41 <210> SEQ ID NO: 3
       42 <211> LENGTH: 2075
       43 <212> TYPE: DNA
       44 <213> ORGANISM: Homo sapiens
       46 <220> FEATURE:
       48 <221> NAME/KEY: CDS
       49 <222> LOCATION: (130)...(1179)
       51 <400> SEQUENCE: 3
       52 cccggccgac agccccgaga cgacagcccg gcgcgtcccg gtccccacct ccgaccaccg 60
       53 ccagcgctcc aggccccgcg ctccccgctc gccgccaccg cgccctccgc tccgcccgca 120
       54 gtgccaacc atg acc gcc gcc agt atg ggc ccc gtc cgc gtc gcc ttc gtg 171
       55            Met Thr Ala Ala Ser Met Gly Pro Val Arg Val Ala Phe Val
       56             1               5                  10
       58 gtc ctc ctc gcc ctc tgc agc cgg ccg gcc gtc ggc cag aac tgc agc 219
       59 Val Leu Leu Ala Leu Cys Ser Arg Pro Ala Val Gly Gln Asn Cys Ser
       60   15              20                  25                  30
       62 ggg ccg tgc cgg tgc ccg gac gag ccg gcg ccg cgc tgc ccg gcg ggc 267
       63 Gly Pro Cys Arg Cys Pro Asp Glu Pro Ala Pro Arg Cys Pro Ala Gly
       64                 35                  40                  45
       66 gtg agc ctc gtg ctg gac ggc tgc ggc tgc tgc cgc gtc tgc gcc aag 315
       67 Val Ser Leu Val Leu Asp Gly Cys Gly Cys Cys Arg Val Cys Ala Lys
       68                 50                  55                  60
       70 cag ctg ggc gag ctg tgc acc gag cgc gac ccc tgc gac ccg cac aag 363
       71 Gln Leu Gly Glu Leu Cys Thr Glu Arg Asp Pro Cys Asp Pro His Lys
```

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/006,191

Input Set : A:\RTS-0274 Sequence Listing.txt
Output Set: N:\CRF3\12142001\I006191.raw

```
72          65              70              75
74 ggc ctc ttc tgt gac ttc ggc tcc ccg gcc aac cgc aag atc ggc gtg    411
75 Gly Leu Phe Cys Asp Phe Gly Ser Pro Ala Asn Arg Lys Ile Gly Val
76      80              85                      90
78 tgc acc gcc aaa gat ggt gct ccc tgc atc ttc ggt ggt acg gtg tac    459
79 Cys Thr Ala Lys Asp Gly Ala Pro Cys Ile Phe Gly Gly Thr Val Tyr
80  95              100                 105                 110
82 cgc agc gga gag tcc ttc cag agc agc tgc aag tac cag tgc acg tgc    507
83 Arg Ser Gly Glu Ser Phe Gln Ser Ser Cys Lys Tyr Gln Cys Thr Cys
84              115                 120                 125
86 ctg gac ggg gcg gtg ggc tgc atg ccc ctg tgc agc atg gac gtt cgt    555
87 Leu Asp Gly Ala Val Gly Cys Met Pro Leu Cys Ser Met Asp Val Arg
88              130                 135                 140
90 ctg ccc agc cct gac tgc ccc ttc ccg agg agg gtc aag ctg ccc ggg    603
91 Leu Pro Ser Pro Asp Cys Pro Phe Pro Arg Arg Val Lys Leu Pro Gly
92          145                 150                 155
94 aaa tgc tgc gag gag tgg gtg tgt gac gag ccc aag gac caa acc gtg    651
95 Lys Cys Cys Glu Glu Trp Val Cys Asp Glu Pro Lys Asp Gln Thr Val
96      160                 165                 170
98 gtt ggg cct gcc ctc gcg gct tac cga ctg gaa gac acg ttt ggc cca    699
99 Val Gly Pro Ala Leu Ala Ala Tyr Arg Leu Glu Asp Thr Phe Gly Pro
100 175                 180                 185                 190
102 gac cca act atg att aga gcc aac tgc ctg gtc cag acc aca gag tgg    747
103 Asp Pro Thr Met Ile Arg Ala Asn Cys Leu Val Gln Thr Thr Glu Trp
104              195                 200                 205
106 agc gcc tgt tcc aag acc tgt ggg atg ggc atc tcc acc cgg gtt acc    795
107 Ser Ala Cys Ser Lys Thr Cys Gly Met Gly Ile Ser Thr Arg Val Thr
108              210                 215                 220
110 aat gac aac gcc tcc tgc agg cta gag aag cag agc cgc ctg tgc atg    843
111 Asn Asp Asn Ala Ser Cys Arg Leu Glu Lys Gln Ser Arg Leu Cys Met
112          225                 230                 235
114 gtc agg cct tgc gaa gct gac ctg gaa gag aac att aag aag ggc aaa    891
115 Val Arg Pro Cys Glu Ala Asp Leu Glu Glu Asn Ile Lys Lys Gly Lys
116      240                 245                 250
118 aag tgc atc cgt act ccc aaa atc tcc aag cct atc aag ttt gag ctt    939
119 Lys Cys Ile Arg Thr Pro Lys Ile Ser Lys Pro Ile Lys Phe Glu Leu
120 255                 260                 265                 270
122 tct ggc tgc acc agc atg aag aca tac cga gct aaa ttc tgt gga gta    987
123 Ser Gly Cys Thr Ser Met Lys Thr Tyr Arg Ala Lys Phe Cys Gly Val
124              275                 280                 285
126 tgt acc gac ggc cga tgc tgc acc ccc cac aga acc acc acc ctg ccg    1035
127 Cys Thr Asp Gly Arg Cys Cys Thr Pro His Arg Thr Thr Thr Leu Pro
128              290                 295                 300
130 gtg gag ttc aag tgc cct gac ggc gag gtc atg aag aag aac atg atg    1083
131 Val Glu Phe Lys Cys Pro Asp Gly Glu Val Met Lys Lys Asn Met Met
132          305                 310                 315
134 ttc atc aag acc tgt gcc tgc cat tac aac tgt ccc gga gac aat gac    1131
135 Phe Ile Lys Thr Cys Ala Cys His Tyr Asn Cys Pro Gly Asp Asn Asp
136      320                 325                 330
```

RAW SEQUENCE LISTING   DATE: 12/14/2001
PATENT APPLICATION: US/10/006,191   TIME: 10:30:20

Input Set : A:\RTS-0274 Sequence Listing.txt
Output Set: N:\CRF3\12142001\I006191.raw

```
138 atc ttt gaa tcg ctg tac tac agg aag atg tac gga gac atg gca tga   1179
139 Ile Phe Glu Ser Leu Tyr Tyr Arg Lys Met Tyr Gly Asp Met Ala  *
140 335                 340                 345
142 agccagagag tgagagacat taactcatta gactggaact tgaactgatt cacatctcat 1239
143 ttttccgtaa aaatgatttc agtagcacaa gttatttaaa tctgtttttc taactggggg 1299
144 aaaagattcc cacccaattc aaaacattgt gccatgtcaa acaaatagtc tatcttcccc 1359
145 agacactggt ttgaagaatg ttaagacttg acagtggaac tacattagta cacagcacca 1419
146 gaatgtatat taaggtgtgg ctttaggagc agtgggaggg taccggcccg gttagtatca 1479
147 tcagatcgac tcttatacga gtaatatgcc tgctatttga agtgtaattg agaaggaaaa 1539
148 ttttagcgtg ctcactgacc tgcctgtagc cccagtgaca gctaggatgt gcattctcca 1599
149 gccatcaaga gactgagtca agttgttcct taagtcagaa cagcagactc agctctgaca 1659
150 ttctgattcg aatgacactg ttcaggaatc ggaatcctgt cgattagact ggacagcttg 1719
151 tggcaagtga atttgcctgt aacaagccag attttttaaa atttatattg taaatattgt 1779
152 gtgtgtgtgt gtgtgtgtat atatatatat atatgtacag ttatctaagt taatttaaag 1839
153 ttgtttgtgc ctttttattt ttgttttttaa tgctttgata tttcaatgtt agcctcaatt 1899
154 tctgaacacc ataggtagaa tgtaaagctt gtctgatcgt tcaaagcatg aaatggatac 1959
155 ttatatggaa attctgctca gatagaatga cagtccgtca aaacagattg tttgcaaagg 2019
156 ggaggcatca gtgtcttggc aggctgattt ctaggtagga aatgtggtag ctcacg     2075
159 <210> SEQ ID NO: 4
160 <211> LENGTH: 22
161 <212> TYPE: DNA
162 <213> ORGANISM: Artificial Sequence
164 <220> FEATURE:
166 <223> OTHER INFORMATION: PCR Primer
168 <400> SEQUENCE: 4
169 acaagggcct cttctgtgac tt                                            22
172 <210> SEQ ID NO: 5
173 <211> LENGTH: 22
174 <212> TYPE: DNA
175 <213> ORGANISM: Artificial Sequence
177 <220> FEATURE:
179 <223> OTHER INFORMATION: PCR Primer
181 <400> SEQUENCE: 5
182 ggtacaccgt accaccgaag at                                            22
185 <210> SEQ ID NO: 6
186 <211> LENGTH: 23
187 <212> TYPE: DNA
188 <213> ORGANISM: Artificial Sequence
190 <220> FEATURE:
192 <223> OTHER INFORMATION: PCR Probe
194 <400> SEQUENCE: 6
195 tgtgcaccgc caaagatggt gct                                           23
198 <210> SEQ ID NO: 7
199 <211> LENGTH: 19
200 <212> TYPE: DNA
201 <213> ORGANISM: Artificial Sequence
203 <220> FEATURE:
205 <223> OTHER INFORMATION: PCR Primer
207 <400> SEQUENCE: 7
```

```
208 gaaggtgaag gtcggagtc                                                    19
211 <210> SEQ ID NO: 8
212 <211> LENGTH: 20
213 <212> TYPE: DNA
214 <213> ORGANISM: Artificial Sequence
216 <220> FEATURE:
218 <223> OTHER INFORMATION: PCR Primer
220 <400> SEQUENCE: 8
221 gaagatggtg atgggatttc                                                   20
224 <210> SEQ ID NO: 9
225 <211> LENGTH: 20
226 <212> TYPE: DNA
227 <213> ORGANISM: Artificial Sequence
229 <220> FEATURE:
231 <223> OTHER INFORMATION: PCR Probe
233 <400> SEQUENCE: 9
234 caagcttccc gttctcagcc                                                   20
237 <210> SEQ ID NO: 10
238 <211> LENGTH: 2334
239 <212> TYPE: DNA
240 <213> ORGANISM: Mus musculus
242 <220> FEATURE:
244 <221> NAME/KEY: CDS
245 <222> LOCATION: (206)...(1252)
247 <400> SEQUENCE: 10
248 gaagactcag ccagatccac tccagctccg accccaggag accgacctcc tccagacggc 60
249 agcagcccca gcccagccga caaccccaga cgccaccgcc tggagcgtcc agacaccaac 120
250 ctccgcccct gtccgaatcc aggctccggc cgcgcctctc gtcgcctctg caccctgctg 180
251 tgcatcctcc taccgcgtcc cgatc atg ctc gcc tcc gtc gca ggt ccc atc    232
252                             Met Leu Ala Ser Val Ala Gly Pro Ile
253                               1               5
255 agc ctc gcc ttg gtg ctc ctc gcc ctc tgc acc cgg cct gct acg ggc   280
256 Ser Leu Ala Leu Val Leu Leu Ala Leu Cys Thr Arg Pro Ala Thr Gly
257  10              15                  20                  25
259 cag gac tgc agc gcg caa tgt cag tgc gca gcc gaa gca gcg ccg cac   328
260 Gln Asp Cys Ser Ala Gln Cys Gln Cys Ala Ala Glu Ala Ala Pro His
261              30                  35                  40
263 tgc ccc gcc ggc gtg agc ctg gtg ctg gac ggc tgc ggc tgc tgc cgc   376
264 Cys Pro Ala Gly Val Ser Leu Val Leu Asp Gly Cys Gly Cys Cys Arg
265              45                  50                  55
267 gtc tgc gcc aag cag ctg gga gaa ctg tgt acg gag cgt gac ccc tgc   424
268 Val Cys Ala Lys Gln Leu Gly Glu Leu Cys Thr Glu Arg Asp Pro Cys
269              60                  65                  70
271 gac cca cac aag ggc ctc ttc tgc gat ttc ggc tcc ccc gcc aac cgc   472
272 Asp Pro His Lys Gly Leu Phe Cys Asp Phe Gly Ser Pro Ala Asn Arg
273          75                  80                  85
275 aag atc gga gtg tgc act gcc aaa gat ggt gca ccc tgt gtc ttc ggt   520
276 Lys Ile Gly Val Cys Thr Ala Lys Asp Gly Ala Pro Cys Val Phe Gly
277  90                  95                  100                 105
```
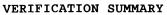
RAW SEQUENCE LISTING   DATE: 12/14/2001
PATENT APPLICATION: US/10/006,191   TIME: 10:30:20

Input Set : A:\RTS-0274 Sequence Listing.txt
Output Set: N:\CRF3\12142001\I006191.raw

```
279 ggg tcg gtg tac cgc agc ggt gag tcc ttc caa agc agc tgc aaa tac   568
280 Gly Ser Val Tyr Arg Ser Gly Glu Ser Phe Gln Ser Ser Cys Lys Tyr
281             110             115                 120
283 caa tgc act tgc ctg gat ggg gcc gtg ggc tgc gtg ccc ctg tgc agc   616
284 Gln Cys Thr Cys Leu Asp Gly Ala Val Gly Cys Val Pro Leu Cys Ser
285             125             130                 135
287 atg gac gtg cgc ctg ccc agc cct gac tgc ccc ttc ccg aga agg gtc   664
288 Met Asp Val Arg Leu Pro Ser Pro Asp Cys Pro Phe Pro Arg Arg Val
289         140             145                 150
291 aag ctg cct ggg aaa tgc tgc gag gag tgg gtg tgt gac gag ccc aag   712
292 Lys Leu Pro Gly Lys Cys Cys Glu Glu Trp Val Cys Asp Glu Pro Lys
293         155             160                 165
295 gac cgc aca gca gtt ggc cct gcc cta gct gcc tac cga ctg gaa gac   760
296 Asp Arg Thr Ala Val Gly Pro Ala Leu Ala Ala Tyr Arg Leu Glu Asp
297 170             175                 180                 185
299 aca ttt ggc cca gac cca act atg atg cga gcc aac tgc ctg gtc cag   808
300 Thr Phe Gly Pro Asp Pro Thr Met Met Arg Ala Asn Cys Leu Val Gln
301             190             195                 200
303 acc aca gag tgg agc gcc tgt tct aag acc tgt ggg atg ggc atc tcc   856
304 Thr Thr Glu Trp Ser Ala Cys Ser Lys Thr Cys Gly Met Gly Ile Ser
305             205             210                 215
307 acc cga gtt acc aat gac aat acc ttc tgc aga ctt gag aag cag agt   904
308 Thr Arg Val Thr Asn Asp Asn Thr Phe Cys Arg Leu Glu Lys Gln Ser
309         220             225                 230
311 cgc ctc tgc atg gtc agg ccc tgc gaa gct gac ctg gag gaa aac att   952
312 Arg Leu Cys Met Val Arg Pro Cys Glu Ala Asp Leu Glu Glu Asn Ile
313         235             240                 245
315 aag aag ggc aaa aag tgc atc cgg aca cct aaa atc gcc aag cct gtc   1000
316 Lys Lys Gly Lys Lys Cys Ile Arg Thr Pro Lys Ile Ala Lys Pro Val
317 250             255                 260                 265
319 aag ttt gag ctt tct ggc tgc acc agt gtg aag aca tac agg gct aag   1048
320 Lys Phe Glu Leu Ser Gly Cys Thr Ser Val Lys Thr Tyr Arg Ala Lys
321             270             275                 280
323 ttc tgc ggg gtg tgc aca gac ggc cgc tgc tgc aca ccg cac aga acc   1096
324 Phe Cys Gly Val Cys Thr Asp Gly Arg Cys Cys Thr Pro His Arg Thr
325             285             290                 295
327 acc act ctg cca gtg gag ttc aaa tgc ccc gat ggc gag atc atg aaa   1144
328 Thr Thr Leu Pro Val Glu Phe Lys Cys Pro Asp Gly Glu Ile Met Lys
329         300             305                 310
331 aag aat atg atg ttc atc aag acc tgt gcc tgc cat tac aac tgt cct   1192
332 Lys Asn Met Met Phe Ile Lys Thr Cys Ala Cys His Tyr Asn Cys Pro
333         315             320                 325
335 ggg gac aat gac atc ttt gag tcc ctg tac tac agg aag atg tac gga   1240
336 Gly Asp Asn Asp Ile Phe Glu Ser Leu Tyr Tyr Arg Lys Met Tyr Gly
337 330             335                 340                 345
339 gac atg gcg taa agccaggaag taagggacac gaactcatta gactataact   1292
340 Asp Met Ala  *
343 tgaactgagt tgcatctcat tttcttctgt aaaaacaatt acagtagcac attaatttaa 1352
344 atctgtgttt ttaactaccg tgggaggaac tatcccacca aagtgagaac gttatgtcat 1412
```

VERIFICATION SUMMARY   DATE: 12/14/2001
PATENT APPLICATION: US/10/006,191   TIME: 10:30:21

Input Set : A:\RTS-0274 Sequence Listing.txt
Output Set: N:\CRF3\12142001\I006191.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application No
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date